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ABSTRACT

Taken from the terms "computer" and "paideia," the term "compupaideia" refers to the cultural context of computer assisted instruction (CAI) and computer assisted learning (CAL). The question may be raised, what is the cultural context that made CAI desirable, and how does one determine whether CAI is well suited to a particular culture? The answers to these questions may be found by reviewing the research on computer based instruction, and by examining educational environments and educational sociology. For example, if a student sometimes fails to learn, the cause may be because of a failure to understand that student's cultural traits, characteristics, and background. Compupaedia deals with culture-sensitive CAI programs, and recognizes its importance in a pluralistic society where people of diverse cultural backgrounds must learn successfully in standardized educational contexts. Rather than provide guarantees for success, compupaedia simply suggests that culture, too, may be an important variable in the design of instruction. (15 references) (DB)

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COMPUTERS AND PAIDEIA: THE CULTURAL CONTEXT OR "COMPUPAIDEIA" OF C.A.L.

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Paper presented at the 2nd International Conference of Computer Assisted Learning (ICCAL) in Dallas, Texas, c/o School of Engineering and Computer Science, University of Texas-Dallas, May 9, 1989.

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COMPUTERS AND PAIDEIA:

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Paper presented at the 2nd International Conference on Computer Assisted Learning (ICCAL) in Dallas, Texas, c/o School of Engineering and Computer Science, University of Texas-Dallas, May 9, 1989

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1. COMPUPAEDEIA

We have coined the term "compupaedeia" to refer to the cultural context of computer assisted learning (CAL). It is derived from the terms "computer" and "paideia." The term "paideia" is used here in its classical sense of education as the whole of culture, as contrasted to the more limited pedagogy which the term paideia has come to signify in modern times (in modern Greek, and in English words derived from that term). Consequently, compupaedia refers not simply to computer education, but the cultural ideals that make CAL possible.

Where today our society uses schools to educate, in ancient culture the society itself became the school. If learning through a microcomputer requires that one read the screen and punch the keyboard, learning in classical times required that one move around the city and learn from experience "first hand." The city was his computer screen, while life within it held most of the keys to his understanding.

It is not surprising that, as many cultural historians, including Jaeger, Schiller, and Marrou, have told us, under such conception of education, people learned in the streets, which were for that reason well adorned with great works of art, as they still are in many European cities; in the marketplace, which also served as Socrates' school; or at the theater, which was probably more avidly-watched than is TV today.

The question may be raised, what is the cultural context that made computer-assisted learning desirable, if not necessary? And even assuming that CAL fulfills certain cultural needs which no other method does, how do we know which type of computer-assisted learning is best suited, if at all, for what kind of culture?

2. THE CULTURAL CONTEXT

Historically man would rather do what he likes, than what he doesn't like. However simple or obvious the above observation may seem to some, it nevertheless explains much of what man does or did that on its face may seem mysterious or unexplainable. If we had a visitor from outer space, he may be

computer monitor punching keys on a keyboard unless he also knew something of man's desires, for example, his desire to calculate, to think, to understand, to save time, to work more with his brain (than with his brawn), to play, to communicate, to interact, to create, or to survive. What the desires of any particular human being may be may depend on the particular culture in which he was raised, and the values in his culture which he decided or was able to finally adopt or to reject. If the extraterrestial society from which our visitor came from had different basic desires, say, the desire to sleep as much as possible, then the behavior of a computer programmer may make less sense to him than that of someone suffering from sleep disorders.

What man has wanted or desired is both the result and cause of his culture: he learns to like or want certain things, which in turn he may decide to alter or even reject. If by "culture" we mean a collection of ideas, then certainly it can't be said that man does only what his culture demands, as there are many people who rarely or infrequently act according to their ideas.

What man wants to do depends also on what he CAN do, including on how "good" or effective are the tools he designs, that is, on how effectively or "intelligently" he manipulates his "limiting" or "disadvantageous" environment to his advantage. Computer-assisted learning may be seen as just such an attempt by man to overcome certain obstacles to his desire to learn.

Man's inability to always do what he likes may also explain why man sometimes escapes into dreamland where he thinks or tricks himself into believing he CAN do whatever he wants to do in spite the fact that what he wants may be realistically impossible for him to do. What man cannot do by himself, or through the tools he invents or designs, he sometimes "does" in his cultural myths or phantasies, or in his imagination. This, according to Sigmund Freud, is also the basis of much of man's religion, where he fashions himself able to do whatever he wants at some point in his immortal "afterlife." (Freud, The Future of an Illusion.) The question may be raised here, to what extent has modern man found in the computer a new religion or myth through which to imagine himself finally "liberated?" And by extension, how true are seemingly exaggerated claims regarding the learning-effectiveness of certain computer tools? In the paper we address these issues partly by reviewing the research on computer based instruction, and partly by discussing the social and cultural contexts of academic achievement.

If the history of civilizations is any proof, one of man's strongest desires has historically been his desire to know, to uderstand why things happen as they do. Consequently, man has always desired an education for himself and for his children not simply in order to survive, as man's ambly documented willingness to die for a cause has proven not to be the case, but also to fulfill his so-called "cognitive needs" (White and others in the field of cognitive psychology). For centuries what man learned depended not only on what he wanted to learn, but also on what he knew, or was allowed by the circumstances or his political elites or culture to believe he could or was available to him to learn (examined by political science and sociology of knowledge).

As man's awareness of all that can be learned increased, so did his desire to learn. Where in the past he could get by in an information-empty world by working with his hands, he is now increasingly pressed by the increased automation or cybernation of work, to work with his mind (see Alvin Toffler, Future Shock). Witness, for example, the closing of factories, and the return to school of thousands of factory workers who must now either upgrade their learning of the new skills and knowledge, or be condemned to work at much lower wages than before, or, worse, not work at all (see the works of Daniel Bell).

3. EDUCATIONAL CONTEXT

If sometimes we fail to help our students learn, whether through computers or some other method, it may be more because of our failure to understand the cultural background of our students, than because our students have failed to understand the culture that necessarily underlies our methods--in this case, our computer programs or "software." The failure of a CAL program to motivate our students to use it, or to improve their academic achievement, may be more the result of our failure to write it, design it, market it, or present it in ways which our students will come to understand or appreciate, given their cultural background, than a flaw in the strictly technical aspects of the program itself (see the works by James Banks, Moyhihan, Garcia, Greer, and others).

Compupaedia deals with the cultural context of computer-assisted learning and culture-sensitive CAL programs. That we do so becomes increasingly important in a pluralistic society such as the United States, and by extension the whole "global village," where people of diverse cultural backgrounds cannot be expected to learn the same way, or with "generic" or standardized CAL programs whose only adaptation to different cultures is the corresponding translation of the text. If the

history of educational innovations through the centuries has taught us anything, it is that educational tools, like all tools, are the result of their culture, and won't be used or long unless they either fit their culture, or change it so their culture "fits" them.

There is also that most paradoxical psychological phenomenon, known in psychoanalysis as "internalization," of our students internalizing as their own those tools or methods which originally they resisted or rejected, but which in turn they suconsciously adopt, and even superimpose on their own children (see the works of Sigmund Freud, especially The Ego and the Id). The question is, should CAL designers attempt to consciously or subconsciously superimpose their own computer-encoded values on their students, however well-intended, or well hidden they may be inside the program itself, or in the way the program is presented--or should they design culture-sensitive programs that can be easily re-adjusted (or as easily as it is possible at the time) to reflect the culture of their students? Even assuming that all students can be expected to eventually internalize ANY value if only held hostage for a sufficient amount of time, is it possible in today's increasingly more democratic and "horizontal" world to hope to be able to impose one's values, whether through the design of computer programs or through some other instructional tool (for example, textbooks), without considerable resistance by the students?

4. EFFECTIVE CAL

Compupaedeia doesn't assume that an understanding of our students' culture will suffice to make CAL "successful." To guarantee success, there are a variety of factors that must be considered, from technical and economic, to subject-substantive and engineerial. After all, each student is in a sense a "cutlure of one," as his family and social background may be unlike anyone else's. Compupaedeia simply warms us to the idea that culture, too, may be an important variable in the CAL equation, without which our CAL-designed programs, however advanced technically, may fail to make significant inroads among certain student populations.

The analogy may be drawn here to the building of technically immaculate industrial complexes in third world nations by western companies that eventually failed to help either their parent company or their host: they simply didn't understand the realities of the native culture, or were unwilling to. Some of these factories may still be seen lying empty, like so many ghost towns made of steel and concrete, while the natives lament the destruction of their land and

livelihood (see Ali Mazrui's works).

What guarantee do we have that computer stations built will not become computer stations wasted? A good example of this happening is the overbuilding of microcomputer stations in hunderds of high schools across the country in the 1970s and 80s, only to sit there unused and idle, a sad reminder of man's enthusiasm gone haywire. The reason? High school teachers didn't know how to use them (see Borman's and Lykos' study of the Lyons Township High School; also Run, Computer, Run). To the extent that schools have their own particular "culture," to that extent research and development for school-based CAL should be examined in the context of school culture by sociologists of education).

REFERENCES

Banks, James A. Multiethnic Education: Theory and Practice. 2nd ed. Boston: Allyn & Bacon, 1988.

Boocock, Sarane S. Sociology of Education: An Introduction. 2nd ed. Lanham: University Press of America, 1980.

Freud, Sigmund. The Future of an Illusion. Tr. W.S. Robson-Scott. New York: H. Liveright, 1928.

Freud, Sigmund. The Ego and the Id. Tr. J. Riviere. Rev. and ed. J. Strachey. New York: W.W. Norton, 1962.

Glazer, Nathan and Daniel P. Moynihan, eds. Ethnicity: Theory and Experience. Cambridge, Mass.: Harvard University Press, 1975.

Greer, Colin. The Great School Legend: A Revisionist Interpretation of American Public Education. New York: The Viking Press, 1973.

Jaeger, Werner. Paideia: The Ideals of Greek Culture. New York: Oxford University Press, 1944.

Lykos, Peter and L. Borman. "A Case Study of the Computer Literacy Program at Lyons Township High School." Unpublished monograph. Department of Chemistry, Illinois Institute of Technology, Chicago, Illinois, 1982.

Marrou, Henri Irene. A History of Education in Antiquity. Tr. G. Lamb. Madison, Wisc.: University of Wisconsin Press, 1982.

Mazrui, Ali A. Africa's International Relations: The Diplomacy of Dependency and Change. Boulder, Colo.: Westview Press, 1977.

Mazrui, Ali A. The African Condition: A Political Diagnosis. New York: Cambridge University Press, 1980.

Oettinger, Anthony G. Run, Computer, Run: The Mythology of Educational Innovation. Cambridge, Mass.: Harvard University Press, 1969.

Schiller, Friedrich. On the Aesthetic Education of Man in a Series of Letters. Tr. R. Snell. New Haven: Yale University Press, 1954.

Walberg, Herbert J., ed. Educational Environments and Effects: Evaluation, Policy, and Productivity. Berkeley, Calif.: McCutchan Publishers, 1979.

Waller, Willard Walter. The Sociology of Teaching. New York: Russell & Russell, 1961.